Analysis of the Enterprise Integration Patterns and underlying concepts.

References:

1. https://en.wikipedia.org/wiki/Enterprise\_Integration\_Patterns
2. <https://dzone.com/articles/enterprise-integration-patterns-from-esb-to-esp-an>
3. <https://github.com/elit0451/EIPatterns>
4. <https://camel.apache.org/components/3.20.x/eips/enterprise-integration-patterns.html>
5. <https://ieeexplore.ieee.org/document/7368007>
6. <https://ieeexplore.ieee.org/document/8536143>

# Team:

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# Type of Project:

Research and Development oriented, more focused on understanding of integration patterns using Apache Camel (open-source) and it’s components which use the concepts of concurrent processing, load sharing, and messaging queues.

# Objectives:

1. To overview the most used Integration patterns.
2. To explore and document the available tools/software to achieve the implementation.
3. To implement and demo any one of the integration patterns using Java/C++
4. To understand the implementation of software components (Apache camel) which are used for parallel/concurrent processing of messages, and synchronization of distributed systems using Messaging Queues.

# Plan to achieve:

1. Research and understand the various integration patterns.
2. Read the published papers on integration patterns.
3. Shortlist the most used integration patterns.
4. Learn about the open-source software used in implementation.
5. Learn the various components of the software (Apache Camel) and their implementation.
6. Use this knowledge to implement and demo an integration pattern taking a use case.
7. Understand how the concepts of concurrency, parallel processing and synchronization is achieved in effectively implementing these components.
8. Analyze and extend the integration pattern to a distributed system (multiple consumers) and report the findings.
9. Document the finding and report the analysis.